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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/806,800	06/25/2001	Adriaan Retief Swanepoel	0182.00001	6013

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Gerald E McGlynn III
Bliss McGlynn
2075 West Big Beaver Rd Suite 600
Troy, MI 48084

EXAMINER

BALSIS, SHAY L

ART UNIT PAPER NUMBER

1744

DATE MAILED: 05/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/806,800

Applicant(s)

SWANEPOEL, ADRIAAN RETIEF

Examiner

Shay L. Balsis

Art Unit

1744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10, 13 and 14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 13 and 14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 25 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

The indicated allowability of claim 14 is withdrawn in view of the newly discovered reference(s) to Wittwer. A broader interpretation of the claim is being made. Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 7-10 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wittwer (USPN 3899800) in view of Hancou (USPN 4337547).

Wittwer teaches a wiper comprising a force-applying member (12) connected to the center backbone at two spaced apart points (31, 32). Wittwer teaches a superstructure with four pairs of equally spaced apart claws (30, 31, 32 and 33) that slidably engage with the backing strip (26) by means of claws with pin type structure that engage around the outer exposed longitudinal slot edge portions of the flexible backing strip. The remote claws (30, 33) are at a location $1/8$ the length of the wiper blade element in from the ends. The four points of pressure being applied to the backing strip at equally spaced apart locations between the remote pressure points beneath the claws (30, 33). It can be determined that the spacing between the two points (31, 32) is $1/4$ the length of the wiper blade and the ratio of spacing to the total length is $1/4$ (see figure below), therefore, $S=0.25*L$ and $R=0.25$ which falls in the ranges claimed by the applicant. The preferred spacing distance S_p between the spaced apart points is *about*

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$S_p = 0.363 * L - 0.000146 * L^2$. The preferred ratio R_p is *about* $R_p = 0.363 - 0.000146 * L$. Wittwer teaches all the essential elements of the claimed invention however fails to teach an elongate curved backbone which is made of a single, unitary, resiliently flexible beam.

Hancou teaches a windscreen wiper with an elongated curved backbone. The backbone is made from a single, unitary resiliently flexible beam. The backbone has a free form curvature as well as a compound curvature when in use.

It would have been obvious at the time the invention was made to modify Wittwer's invention with the curved backbone as taught by Hancou to ensure a pre-stress when the blade is pressed upon the surface to be wiped (col. 2, lines 24-32).

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wittwer (USPN 3899800) in view of Hancou (USPN 4337547) as applied to claim 1 above and further in view of Appel (USPN 3192551).

Wittwer in view of Hancou teach all the essential elements of the claimed invention however fail to teach that the curved backbone has a varying width and thickness. Appel teaches a curved backbone comprising a varying width and thickness. It would have been obvious to modify the invention of Wittwer in view of Hancou to have a backbone that varies in width and thickness as taught by Appel to provide substantially uniform pressure along the length of contact between the flexible rubber wiping blade and the windshield. Additionally, it would accomodate a correspondingly smaller radius of curvature while retaining appropriate width for resisting lateral drag loads without undue distortion.

Claims 1-10 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Swanepoel ('650) in view of Wittwer (USPN 3899800).

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Swanepoel teaches a windscreen wiper with an elongated curved backbone that tapers uniformly in both thickness and width in a straight line manner from its center to its tips (col. 3, lines 36-37). The backbone is made from a single, unitary resiliently flexible beam. The backbone has a free form curvature as well as a compound curvature when in use. One of skill in the art would by routine experimentation find the optimum thickness and width for the backbone. It would have been obvious to one of skill in the art to make the thickness and width of Swanepoel remain constant to what is desired or required, including as claimed to optimize performance and life of the wiper. Where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955)

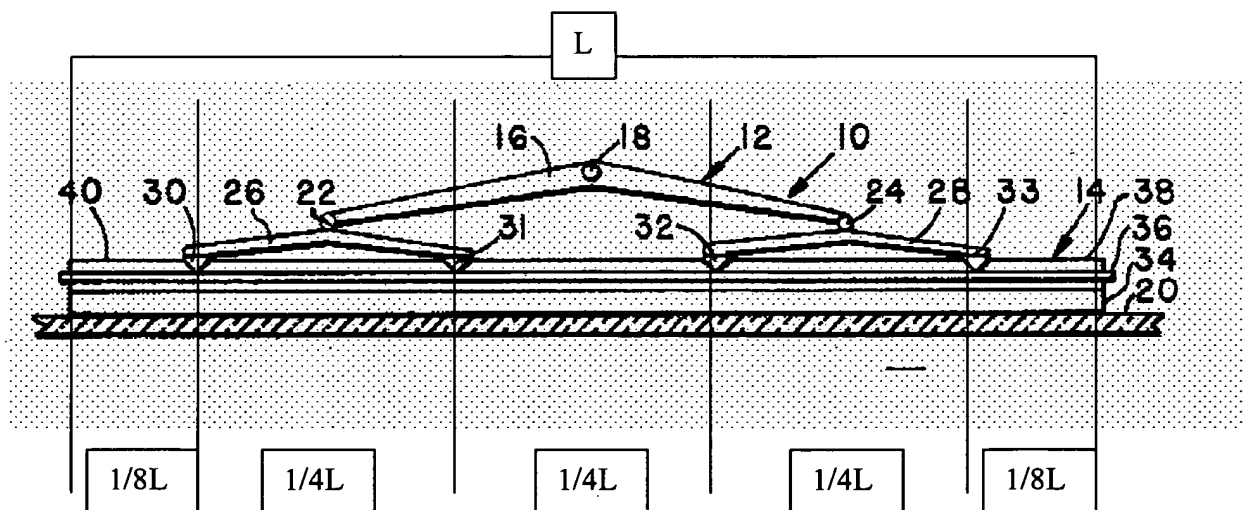
Swanepoel teaches all the essential elements of the claimed invention however fails to teach a force applying member which is connected to the backbone at two spaced apart points. Swanepoel teaches a single centrally located connector for releasably connecting the wiper to a wiper arm.

Wittwer teaches a wiper comprising a force-applying member (12) connected to the center backbone at two spaced apart points (31, 32). Wittwer teaches a superstructure with four pairs of equally spaced apart claws (30, 31, 32 and 33) that slidably engage with the backing strip (26) by means of claws with pin type structure that engage around the outer exposed longitudinal slot edge portions of the flexible backing strip. The remote claws (30, 33) are at a location 1/8 the length of the wiper blade element in from the ends. The four points of pressure being applied to the backing strip at equally spaced apart locations between the remote pressure points beneath the claws (30, 33). It can be determined that the spacing between the two points

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(31, 32) is $\frac{1}{4}$ the length of the wiper blade and the ratio of spacing to the total length is $\frac{1}{4}$ (see figure below), therefore, $S=0.25*L$ and $R=0.25$ which falls in the ranges claimed by the applicant. The preferred spacing distance S_p between the spaced apart points is *about* $S_p=0.363*L-0.000146*L^2$. The preferred ratio R_p is *about* $R_p=0.363-0.000146*L$.

The force-applying member is connected to the backbone in such a manner to permit displacement between the force applying member and the backbone. It would have been obvious at the time the invention was made to modify Swanepoel to use the connector as taught by Wittwer so that the wiper arm will have equally distributed pressure along the blade so that as the blade is brought against the surface of the windshield, the pressure will conform the wiping lip of the wiping member (34) to the curvature of the surface of the windshield and since the pressure points are equally spaced, more pressure will be exerted in the central portion of the blade to hold the central portion of the blade against the surface of the windshield thereby preventing the blade from lifting from the windshield under forces created by a strong wind current across the windshield (col. 3, lines 1-30).



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Response to Arguments

The Applicant arguments regarding measurements and ratios in drawings are accepted. The examiner is withdrawing all the rejections made on measurements and ratios with respect to the Quinlan reference. /

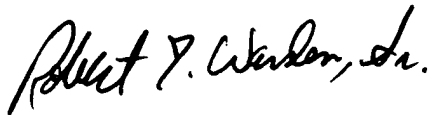
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shay L. Balsis whose telephone number is 571-272-1268. The examiner can normally be reached on 7:30-5:00 M-Th, alternating F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Kim can be reached on 571-272-1142. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Slb
5/26/05


ROBERT J. WARDEN, SR.
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700